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Oedogonium chapmanii sp. nov. from New Zealand

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Samples of algae sent me in 1946 from New Zealand by Professor V. J. Chapman of the department of botany, University College at Auckland, contained a new species of *Oedogonium*. I take pleasure in naming it *Oe. chapmanii*.

Oedogonium chapmanii sp. nov. (Pl. 1, fig. 1-9)

Oedogonium dioicum, nannandrium, idioandrosporum; oogoniis singulis vel 2-6-continuis, oviformibus, vel rarius globosis vel oblongis, poro superiore vel rarius supramediano apertis; oosporis globosis vel subdepresso-globosis, oogonia fere complentibus vel partes polares non complentibus, membrana triplici: episporio etiamque endosporio laevi, mesosporio longitudinaliter costato (in sectione optica transversaliter undulato), costis crenulatis, in medio oosporae 36-50, inter se costulis distinctis transversalibus, interdum anastomosantibus conjunctis, costis paucis ad polos non attingentibus, regione polari disciformi et reticulata, axe cum eo filamenti directione fere continente vel non continente; cellulis suffultoriis tumidis; androsporangiiis singulis, saepe cum cellulis vegetativis alternis; nannandribus in cellulis suffultoriis vel rarius oogoniis sedentibus, stipite paullulum curvato, antheridiis exterioribus, saepe deciduis; cellulis vegetativis capitellatis; cellula terminali obtusa, in filamentis femineis rarius substitutione oogonii nulla; cellula basali tumida, retinaculo irregulariter lobato substrato affixa; cellulis vegetativis 9-17 (-20) μ , latis, 46-86 μ , longis; oogoniis 34-49 μ , latis, 36-62 μ , longis; oosporis 32-43 μ , latis, 30-43 μ , longis; cellulis suffultoribus 26-29 μ , latis, 53-59 μ , longis; cellulis androsporangiiis 16-21 μ , latis, 17-25 μ , longis; nannandribus 10-11 μ , latis, 34-40 μ , longis; antheridiis 4-6 μ , latis, 4-5 μ , longis; cellulis basalibus 10-19 μ , latis, 36-50 μ , longis.

Dioecious, nannandrous, idioandrosporous; oogonia 1-6, oviform or rarely globose or oblong, with superior pore (rarely supramedian); oospore globose or subdepressed-globose, partly or not filling the oogonium, spore-wall of three

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layers: the outer and inner smooth, the middle with 36-50 crenulate, longitudinal costae, connected by transverse, sometimes anastomosing lines, some costae not continued to the poles; polar areas disc-shaped and reticulate in appearance, polar axis parallel to the filament or not; suffultory cell enlarged; androsporangia single, often alternating with the vegetative cells; dwarf male a little curved, on the suffultory cell or rarely on the oogonium; antheridium exterior, often deciduous; vegetative cell capitellate; terminal cell obtuse, sometimes becoming an oogonium; basal cell enlarged, with an irregularly lobed attachment; vegetative cell 9-17 (-20) x 46-86, u; oogonium 34-49 x 36-62, u; oospore 32-43 x 30-43 μ; suffultory cell 26-29 x 53-59, u; androsporangium 16-21 x 17-25, μ; dwarf male stipe 10-11 x 34-40, u; antheridium 4-6 x 4-5 μ; basal cell 10-19 x 36-50 u.

Collected from water tank on roof of botanical laboratory at University College, Auckland, New Zealand. Specimens in author's collection and in the Cryptogamic Herbarium of the Chicago Natural History Museum.

Oe. chapmanii is related to *Oe. michiganense* Tiffany and to *Oe. taylorii* Jao. It differs from the former in being idioandrosporous, smaller in size, and having different spore-wall structure. From the latter it may be separated on the basis of size, shape of oogonia, and position of androsporangia.

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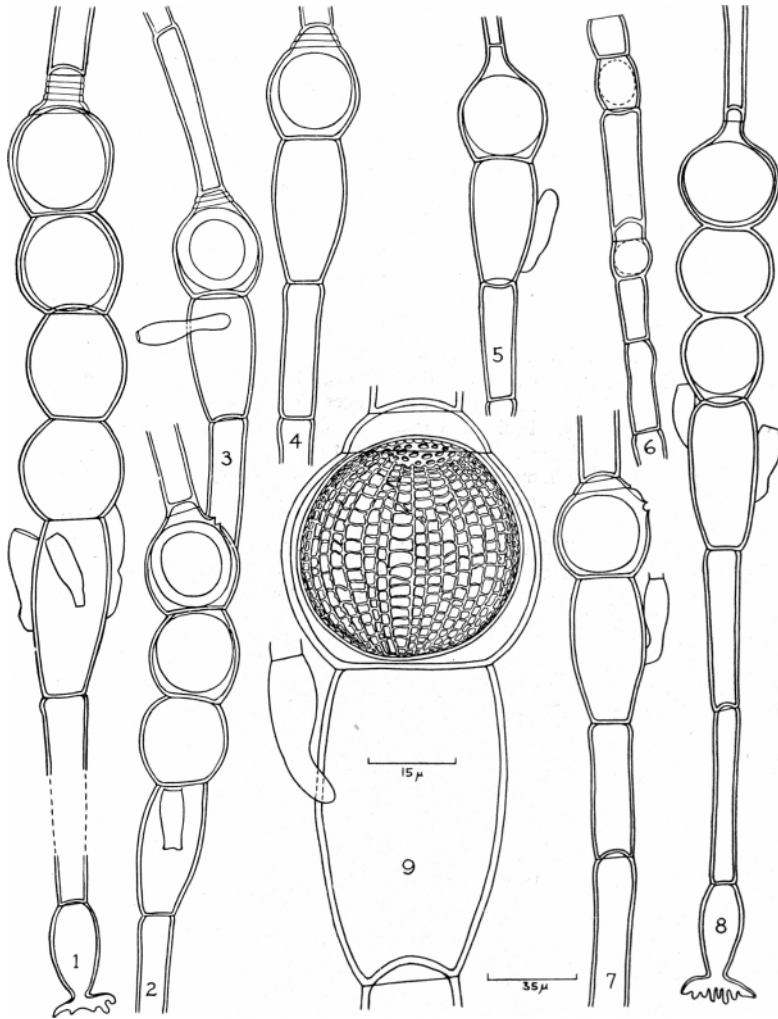


Plate 1. *Oedogonium chapmanii* sp. nov. Fig. 1-8, various plants showing holdfast cells, vegetative cells, suffultory cells, oogonia and oospores, antheridia, androsporangia, androspores, dwarf males. Fig. 9, enlarged diagram showing nature of spore-wall. Diagrams by Jane Roller.

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